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portion added as before. In two days the mass of fungi was raised in little pyramids, which gradually increased in height, so as nearly to fill the phial, and occupied the cells of the mass of ice. A thaw now continued for some time, and the fungi fell to the bottom of the water in the phial, where they occupied about double their original bulk, having sustained an increase to that amount during their vegetation in the ice and snow.

In water these fungi appear also perceptible of vegetation, but they produce new fungi of a green instead of a red colour. By exposure to excessive cold the primitive fungi are killed, but their seed still retains vitality, and if immersed in snow regenerates new fungi, generally of a red colour. The author thinks that snow is undoubtedly the native soil of these fungi.

This paper is illustrated by a drawing, showing the original appearance of the fungi in the snow water from Baffin's Bay, and their gradual increase in the phials, as described in this abstract.

Some Account of the Dugong. By Sir Thomas Stamford Raffles, Governor of Sumatra. Communicated in a Letter to Sir Everard Home, Bart. V.P.R.S. Read May 18, 1820. [Phil. Trans. 1820, p. 174.]

The form of the Dugong resembles that of the common Cetacea. The skin is smooth and thick, with a few scattered hairs, and the head small in proportion, with two short tusks projecting from the extremity of the upper jaw. The place of the incisors is substituted by the rough bristly surfaces of the palate and jaws, which enable the animal to browse upon marine vegetables. There are twelve cylindrical molares, with flat crowns. The aperture of the ears is remarkably small. There are no dorsal or ventral fins; but the place of the anterior extremities is supplied by fins, which, however, are not capable of supporting the animal when out of water.

Upon dissection, the skin was found three quarters of an inch thick. The stomach has two appendages opening into it, near the junction of the duodenum; the intestinal canal is long; the liver has two large and two smaller lobes, one of which is tongue-shaped and covers the gall-bladder; the kidneys are large, and the urinary bladder probably capable of considerable distention; the testicles are placed a little below the kidneys; the urethra opens in a small tubercle between the two lobes of the glans penis.

In the thorax the thymus gland is large, black, and friable; the lungs not lobulated; and the ventricles of the heart, being separated at their points, give it a double appearance.

In regard to the skeleton, the head is remarkable for the manner in which the anterior part of the upper jaw bends downwards, the lower jaw being proportionally truncated. There are fifty-two vertebræ, eighteen ribs on each side, and the sternum is bifurcate at the apex, and articulated to the cartilages of the upper ribs. There is no pelvis nor posterior extremities, but opposite the eighth or tenth

lumbar vertebræ are two narrow flat bones, lodged in the flesh, one on each side. The scapula is thick, and the humerus, radius, and ulna, short and strong.

The flesh of this animal is delicate and juicy, resembling young beef. It is only found in shallows and inlets of the sea, and the greatest number is said to be taken during the northerly monsoon, near the mouth of the Johore river, in the inlet of the sea between Singapore island and the main; they seldom exceed eight or nine feet in length, though they probably grow much larger, but are then too strong to be caught.

Observations on the Human Urethra, showing its internal Structure, as it appeared in the Microscope of F. Bauer, Esq. By Sir Everard Home, Bart. V.P.R.S. Read June 1, 1820. [Phil. Trans. 1820, p. 183.]

Mr. Bauer has discovered, by the aid of the microscope, that the human urethra is made up of two parts, an internal membrane and an external muscular covering; the former, very thin and destitute of fibres, is thrown into folds in a collapsed state, and upon its surface are numerous orifices of glands; the latter is made up of short interwoven fibres, forming fasciculi united by an elastic substance of the consistence of mucus: these observations show the fallacy of the common opinion, that the lining of the urethra consists of circular contractile fibres, and throw a new light upon the disease called Stricture; a spasmotic stricture being a contraction of a small portion of the longitudinal muscular fibres, while the others are relaxed; and a permanent stricture consisting in the exudation of coagulable lymph, in consequence of inflammation, between the fasciculi of muscular fibres and upon the internal membrane.

After advertizing to what is known respecting the structure of the corpus spongiosum, and corpora cavernosa, the author proceeds to state the result of Mr. Bauer's examination of those parts. The cellular structure of the corpora cavernosa is made up of many thin membranous plates, very elastic, and so connected as to form a trellis-work, the edge of which is attached to the elastic ligamentous substance which surrounds them, and which forms the septum that separates them. The structure of the corpus spongiosum resembles that of the corpora cavernosa, except that the parts are formed upon a smaller scale, and that there are no muscular fibres in its ligamentous elastic covering. The various details and descriptions in this paper are illustrated by Mr. Bauer's drawings.

On the Errors in Longitude as determined by Chronometers at Sea, arising from the Action of the Iron in the Ships upon the Chronometers. By George Fisher, Esq. Communicated by John Barrow, Esq. F.R.S. Read June 8, 1820. [Phil. Trans. 1820, p. 196.]

The sudden alterations in the rates of chronometers, when taken on board ships, are generally ascribed to the motion of the vessel; but